

## Exhibit 300: Capital Asset Plan and Business Case Summary

### Part I: Summary Information And Justification (All Capital Assets)

#### Section A: Overview

**1. Date of Submission:** 2011-02-25

**2. Agency:** 026

**3. Bureau:** 00

**4. Name of this Investment:** MSFC - ED - Payload Operations and Integration Center (POIC)

**5. Unique Project (Investment) Identifier (UPI):** 026-00-01-05-01-1001-00

**6. What kind of investment will this be in FY 2012?:** Operations and Maintenance

- Planning
- Full Acquisition
- Operations and Maintenance
- Mixed Life Cycle
- Multi-Agency Collaboration

**7. What was the first budget year this investment was submitted to OMB?** FY2001 or earlier

**8.**

- a. Provide a brief summary of the investment and justification, including a brief description of how this closes in part or in whole an identified agency performance gap, specific accomplishments expected by the budget year and the related benefit to the mission, and the primary beneficiary(ies) of the investment.**

The POIC, located within the HOSC at MSFC, is the primary NASA ground system responsible for integrated operational payload flight control and planning for the ISS program supporting the Science and Space Operations Mission Directorates. It provides payload telemetry processing, command uplink, and planning capabilities for a large number of local Cadre flight controllers and remote ISS payload users and other facilities located throughout the world. It integrates/controls ISS payload flight operations, simulation, and test preparation activities. ISS core systems and payload telemetry data is received, processed, stored, displayed, and distributed to local and remote payload users/controllers. It provides the capability to receive commands from local and remote users, analyze the uplinks for authenticity/authorization, performs required hazardous command checks, transmits the commands to the ISS via Houston, and logs all command system activities for analysis/troubleshooting purposes. It provides the capability to uplink/downlink files to/from the ISS and store/retrieve mission-related documents, procedures, and files. It provides the integration point for planning all ISS payload operations by: assessing/integrating user operational requirements, analyzing available on-orbit and ground resources, and generating detailed execution timelines scheduling the user operations in a safe and efficient manner. It houses a Backup Control Center for Houston. The POIC has been fully operational since March 2001. It is engineered for high availability and security in order to accomplish the ISS research goals while protecting the on-orbit crew and vehicle systems. FY10 Major accomplishments: development completion and IV&V for the implementation of HSPD-12 and initial Obsolescence Driven Avionics Replacement (ODAR) implementation changes within the Payload Planning System; technology refresh including 64-bit servers, personal computers, and archive; BCC certification; and IV&V testing of the real-time Internet Voice system. FY11 and FY12 plans: HSPD-12 implementation extended to remote users; ODAR 300 Mb downlink and distribution operational; final ODAR implementation changes; significant reduction in Oracle usage; portal technology within PIMS; and support for ISS Program increase in payload thru-put and crew utilization.

- b. Provide any links to relevant websites that would be useful to gain additional information on the investment including links to GAO and IG reports.**

Title	Link
NONE	

9.

- a. **Provide the date of the Agency's Executive/Investment Committee approval of this investment.**

2010-09-02

- b. **Provide the date of the most recent or planned approved project charter.** 2010-04-15

10. Contact information?

- a. **Program/Project Manager Name:** \*

**Phone Number:** \*

**Email:** \*

- b. **Business Function Owner Name (i.e. Executive Agent or Investment Owner):** Rod Jones

**Phone Number:** \*

**Email:** \*

**11. What project management qualifications does the Project Manager have? (choose only one per FAC-P/PM or DAWIA):** Project manager has been validated according to FAC-P/PM or DAWIA criteria as qualified for this investment.

- Project manager has been validated according to FAC-P/PM or DAWIA criteria as qualified for this investment.
- Project manager qualifications according to FAC-P/PM or DAWIA criteria is under review for this investment.
- Project manager assigned to investment, but does not meet requirements according to FAC-P/PM or DAWIA criteria.
- Project manager assigned but qualification status review has not yet started.
- No project manager has yet been assigned to this investment.

## Section B: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.B.1: Summary of Funding

(In millions of dollars)

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 and earlier	PY 2010	CY 2011 (CY Continuing Resolution)	BY 2012	BY+1 2013	BY+2 2014	BY+3 2015	BY+4 and beyond	Total
Planning:	*	*	*	*	*	*	*	*	*
Acquisition:	*	*	*	*	*	*	*	*	*
Planning & Acquisition Government FTE Costs	*	*	*	*	*	*	*	*	*
Subtotal Planning & Acquisition(DME):	*	*	*	*	*	*	*	*	*
Operations & Maintenance:	*	*	*	*	*	*	*	*	*
Disposition Costs (optional):	*	*	*	*	*	*	*	*	*
Operations, Maintenance, Disposition Government FTE Costs	*	*	*	*	*	*	*	*	*
Subtotal O&M and Disposition Costs (SS):	*	*	*	*	*	*	*	*	*
TOTAL FTE Costs	*	*	*	*	*	*	*	*	*
TOTAL (not including FTE costs):	*	*	*	*	*	*	*	*	*
TOTAL (including FTE costs):	*	*	*	*	*	*	*	*	*
Number of FTE represented by	*	*	*	*	*	*	*	*	*

**Table I.B.1: Summary of Funding**  
**(In millions of dollars)**

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 and earlier	PY 2010	CY 2011 (CY Continuing Resolution)	BY 2012	BY+1 2013	BY+2 2014	BY+3 2015	BY+4 and beyond	Total
Costs:									

2. Insert the number of years covered in the column “PY-1 and earlier”: 4

3. Insert the number of years covered in the column “BY+4 and beyond”: \*

4. If the summary of funding has changed from the FY 2011 President’s Budget request, briefly explain those changes:

\*

## Section C: Acquisition/Contract Strategy (All Capital Assets)

1.

Table I.C.1 Contracts Table

Contract Status	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	Solicitation ID	Alternative financing	EVM Required	Ultimate Contract Value (M)	Type of Contract/Task Order (Pricing)	Is the contract a Performance Based Service Acquisition (PBSA)?	Effective date	Actual or expected End Date of Contract/Task Order	Extent Completed	Short description of acquisition
Awarded	8000	<a href="#">NNM04AA07C</a>			*	*	\$117.0	Cost Plus Award Fee	Y	2004-01-01	2011-12-31	Y	SUPPORT OF HUNTSVILLE OPERATION S SPACE CENTER
Awarded	8000	<a href="#">NNM04AA07C</a>			*	*	\$47.3	Cost Plus Award Fee	Y	2004-01-01	2011-12-31	Y	SUPPORT OF HUNTSVILLE OPERATION S SPACE CENTER
Awarded	8000	<a href="#">NNM04AA07C</a>			*	*	\$20.0	Cost Plus Award Fee	Y	2004-01-01	2011-12-31	Y	SUPPORT OF HUNTSVILLE OPERATION S SPACE CENTER

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

\*

- 3.
- a. Has an Acquisition Plan been developed? If yes, please answer the questions that follow \*
  - b. Does the Acquisition Plan reflect the requirements of FAR Subpart 7.1 \*
  - c. Was the Acquisition Plan approved in accordance with agency requirements \*
  - d. If "yes," enter the date of approval? \*
  - e. Is the acquisition plan consistent with your agency Strategic Sustainability Performance Plan? \*
  - f. Does the acquisition plan meet the requirements of EOs 13423 and 13514? \*
  - g. If an Acquisition Plan has not been developed, provide a brief explanation.

\*

## Part II: IT Capital Investments

### Section A: General

1.
  - a. Confirm that the IT Program/Project manager has the following competencies: configuration management, data management, information management, information resources strategy and planning, information systems/network security, IT architecture, IT performance assessment, infrastructure design, systems integration, systems life cycle, technology awareness, and capital planning and investment control. yes
  - b. If not, confirm that the PM has a development plan to achieve competencies either by direct experience or education.
  
2. Describe the progress of evaluating cloud computing alternatives for service delivery to support this investment. research continues to possibly utilize nasa cloud computing capacity to support poic mission systems needs. currently demonstrating ability to virtualize systems. some functions are not feasible; any new functions procured will evaluate cloud.
  
3. Provide the date of the most recent or planned Quality Assurance Plan 2010-03-08
  
4.
  - a. Provide the UPI of all other investments that have a significant dependency on the successful implementation of this investment.
  - b. If this investment is significantly dependent on the successful implementation of another investment(s), please provide the UPI(s). 026-00-01-05-01-1408-00,026-00-01-05-01-5020-00
  
5. An Alternatives Analysis must be conducted for all Major Investments with Planning and Acquisition (DME) activities and evaluate the costs and benefits of at least three alternatives and the status quo. The details of the analysis must be available to OMB upon request. Provide the date of the most recent or planned alternatives analysis for this investment.
  
6. Risks must be actively managed throughout the lifecycle of the investment. The Risk Management Plan and risk register must be available to OMB upon request. Provide the date that the risk register was last updated. 2010-07-27

## Section B: Cost and Schedule Performance

Table II.B.1. Comparison of Actual Work Completed and Actual Costs to Current Approved Baseline:

Description of Activity	DME or SS	Agency EA Transition Plan Milestone Identifier	Planned Cost (\$M)	Actual Cost (\$M)	Planned Start Date	Actual Start Date	Planned Completion Date	Actual Completion Date	Planned Percent Complete	Actual Percent Complete
FY01 POIC Operations & Maintenance	SS	*	\$32.8	\$31.8	2000-10-01	2000-10-01	2001-09-30	2001-09-30	100.00%	100.00%
FY02 POIC Operations & Maintenance	SS	*	\$22.3	\$20.2	2001-10-01	2001-10-01	2002-09-30	2002-09-30	100.00%	100.00%
FY03 POIC Operations & Maintenance	SS	*	\$23.3	\$21.5	2002-10-01	2002-10-01	2003-09-30	2003-09-30	100.00%	100.00%
FY04 POIC Operations & Maintenance	SS	*	\$26.7	\$24.8	2003-10-01	2003-10-01	2004-09-30	2004-09-30	100.00%	100.00%
FY05 POIC Operations & Maintenance	SS	*	\$20.9	\$17.8	2004-10-01	2004-10-01	2005-09-30	2005-09-30	100.00%	100.00%
FY06 POIC Operations & Maintenance	SS	*	\$19.4	\$16.1	2005-10-01	2005-10-01	2006-09-30	2006-09-30	100.00%	100.00%
FY07 POIC Operations & Maintenance	SS	*	\$17.4	\$17.0	2006-10-01	2006-10-01	2007-09-30	2007-09-30	100.00%	100.00%
FY08 POIC Operations & Maintenance	SS	*	\$15.1	\$14.8	2007-10-01	2007-10-01	2008-09-30	2008-09-30	100.00%	100.00%
FY09 POIC Operations & Maintenance	SS	*	\$15.8	\$15.4	2008-10-01	2008-10-01	2009-09-30	2009-09-30	100.00%	100.00%
FY10 POIC Operations & Maintenance	SS	*	\$16.4	\$16.2	2009-10-01	2009-10-01	2010-09-30	2010-09-30	100.00%	98.92%
FY11 POIC Operations & Maintenance	SS	*	\$16.9	\$7.4	2010-10-01	2010-10-01	2011-09-30		47.73%	43.49%



Table II.B.1. Comparison of Actual Work Completed and Actual Costs to Current Approved Baseline:

Description of Activity	DME or SS	Agency EA Transition Plan Milestone Identifier	Planned Cost (\$M)	Actual Cost (\$M)	Planned Start Date	Actual Start Date	Planned Completion Date	Actual Completion Date	Planned Percent Complete	Actual Percent Complete
FY12 POIC Operations & Maintenance	SS	*	*	*	2011-10-01	*	2012-09-30	*	*	*
FY13 POIC Operations & Maintenance	SS	*	*	*	2012-10-01	*	2013-09-30	*	*	*
FY14 POIC Operations & Maintenance	SS	*	*	*	2013-10-01	*	2014-09-30	*	*	*
FY15 POIC Operations & Maintenance	SS	*	*	*	2014-10-01	*	2015-09-30	*	*	*
FY16 POIC Operations & Maintenance	SS	*	*	*	2015-10-01	*	2016-09-30	*	*	*
FY17 POIC Operations & Maintenance	SS	*	*	*	2016-10-01	*	2017-09-30	*	*	*
FY18 POIC Operations & Maintenance	SS	*	*	*	2017-10-01	*	2018-09-30	*	*	*
FY19 POIC Operations & Maintenance	SS	*	*	*	2018-10-01	*	2019-09-30	*	*	*
FY20 POIC Operations & Maintenance	SS	*	*	*	2019-10-01	*	2020-09-30	*	*	*

**2. If the investment cost, schedule, or performance variances are not within 10 percent of the current baseline, provide a complete analysis of the reasons for the variances, the corrective actions to be taken, and the most likely estimate at completion.** No corrective actions associated with cost, schedule and/or performance variances are currently required based upon contractor and project performance to date. The original baseline is projected to be achieved. The POIC is an operational facility/system with all known risks managed as part of the Risk Management activities as previously identified.

**3. For mixed lifecycle or operations and maintenance investments an Operational Analysis must be performed annually. Operational analysis may identify the need to redesign or modify an asset by identifying previously undetected faults in design, construction, or installation/integration, highlighting**

whether actual operation and maintenance costs vary significantly from budgeted costs, or documenting that the asset is failing to meet program requirements. The details of the analysis must be available to OMB upon request. Insert the date of the most recent or planned operational analysis.

2009-03-26

**4. Did the Operational analysis cover all 4 areas of analysis: Customer Results, Strategic and Business Results, Financial Performance, and Innovation?**

yes

Section C: Financial Management Systems

Table II.C.1: Financial Management Systems			
System(s) Name	System acronym	Type of Financial System	BY Funding
*	*	*	*

Section D: Multi-Agency Collaboration Oversight (For Multi-Agency Collaborations only)

Table II.D.1. Customer Table:	
Customer Agency	Joint exhibit approval date
NONE	

Table II.D.2. Shared Service Providers		
Shared Service Provider (Agency)	Shared Service Asset Title	Shared Service Provider Exhibit 53 UPI (BY 2011)
*	*	*

Table II.D.3. For IT Investments, Partner Funding Strategies (\$millions):							
Partner Agency	Partner exhibit 53 UPI (BY 2012)	CY Monetary Contribution	CY “In-Kind” Contribution	CY Fee-for-Service	BY Monetary Contribution	BY “In-Kind” Contribution	BY Fee-for-Service
NONE							

Table II.D.4. Legacy Systems Being Replaced		
Name of the Legacy Investment of Systems	Current UPI	Date of the System Retirement
*	*	*

## Section E: Performance Information

Table I.E.1a. Performance Metric Attributes

Technology	Overall Costs	Overall labor and non-labor costs	annual	\$M	Decrease	POIC Operations and Maintenance Support at or below baselined budget	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	\$15.770M	\$15.424M	Met	2010-09-17
			2010	\$16.397m		Not Due	2010-09-17
			2011	\$16.929M		Not Due	2010-09-17
			2012	\$17.660M		Not Due	2010-09-17
Customer Results	Service Availability	Percent Availability	annual	Hours of service availability	Increase	Provide Critical Services (Telemetry, Command, PIMS, Voice) Availability of at Least 98%	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	>98%	100.00% Command (CMD) = 99.85%, PIMS = 99.84%, Voice = 100.00%.	Met	2010-09-17
			2010	>98%		Not Due	2010-09-17
			2011	>98%		Not Due	2010-09-17

Mission and Business Results	Scientific and Technological Research and Innovation	Percent Availability	2012	>98%		Not Due	2010-09-17
			annual	Hours of service availability	Increase	Provide Critical Services (Telemetry, Command, PIMS, Voice) Availability of at Least 98%	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	>98%	100.00% Command (CMD) = 99.85%, PIMS = 99.84%, Voice = 100.00%.	Met	2010-09-17
			2010	>98%		Not Due	2010-09-17
			2011	>98%		Not Due	2010-09-17
Mission and Business Results	Space Exploration and Innovation	Percent Availability	2012	>98%		Not Due	2010-09-17
			annual	Hours of service availability	Increase	Provide Critical Services (Telemetry, Command, PIMS, Voice) Availability of at Least 98%	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	>98%	100.00% Command (CMD) = 99.85%, PIMS = 99.84%, Voice = 100.00%.	Met	2010-09-17
			2010	>98%		Not Due	2010-09-17
			2011	>98%		Not Due	2010-09-17
			2012	>98%		Not Due	2010-09-17
			annual	Hours of service availability	Increase	Provide Critical Services (Telemetry, Command, PIMS, Voice) Availability of at Least 98%	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	>98%	100.00% Command (CMD) = 99.85%, PIMS = 99.84%, Voice = 100.00%.	Met	2010-09-17
			2010	>98%		Not Due	2010-09-17
			2011	>98%		Not Due	2010-09-17
			2012	>98%		Not Due	2010-09-17
			annual	Hours of service availability	Increase	Provide Critical Services (Telemetry, Command, PIMS, Voice) Availability of at Least 98%	2008-10-01
			Fiscal Year	Target	Actual Results	Target "Met" or "Not Met"	Last Updated
			2009	>98%	100.00% Command (CMD) = 99.85%, PIMS = 99.84%, Voice = 100.00%.	Met	2010-09-17
			2010	>98%		Not Due	2010-09-17
			2011	>98%		Not Due	2010-09-17

Processes and Activities	Security	Percent vulnerabilities identified	annual	Number of vulnerabilities detected in scans	Decrease		

\* - Indicates data is redacted.